

# Flurry of activity marks the start of 1998

It may be only a few months old, but 1998 has already brought plenty of topics for the compound semiconductor industry to talk, think, and write about. Most notable has been the flurry of commercial activity, as major manufacturing firms seek to realign themselves according to the latest management thinking of concentrating on core businesses and outsourcing. The year has already seen a number of notable deals, such as Watkins-Johnson's purchase of Samsung's microwave fab in California and TriQuint's acquisition of the former TI GaAs device business from Raytheon. Roy Szweda analyses a number of these deals in his Crystal Gazing column on page 55.

These deals may to some extent reflect the growing maturity and commercial acceptance of the compound semiconductor sector. The industry's strides in this direction continue to be highlighted by the announcements of company expansions, escalating sales figures and general commercial activity. Equipment manufacturers often give a good gauge as to the health of an electronics sector, so the strong recent results from both EMCORE and AIXTRON are particularly welcome. EMCORE enjoyed an increase in its first quarter profits for fiscal 1998 of 44% to US\$12.4 million, although much of this increase stemmed from its materials and device products. AIXTRON, meanwhile, has announced revenues of US\$42.5 million (DM77.8 million) for the 1997 calendar year - an increase of around 63% on the previous year.

Further evidence of market growth comes from the large number of new devices coming onto the market (see page 7), particularly for mobile communication applications.

Of course, the relentless pace of innovation continues to characterize the microelectronics industry and is having its impact on the compound semiconductor sector. Quantum computing is a research area coming

increasingly into vogue and already Sandia National Laboratories has announced the development of a GaAs quantum mechanical transistor, a development *III-Vs Review* plans to cover next issue.

And in a further research development, GaAs and its colleagues may soon be joined by another semiconductor material. Dr Deborah Chung, a University at Buffalo engineer, has recently made the first observation of semiconducting behaviour in a carbon composite material. The discovery lays the foundation for structural electronics, a new technology with the extraordinary potential to endow structural materials with electronic capabilities without computer chips or electrical leads. This could, for example, make possible aircraft components that are themselves huge energy-storage devices and, eventually, even computers without chips.

We live in interesting times!



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